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Application Number	10/020,388		
Filing Date	December - 20(1) - VED		
First Nam d Inventor	William Salkewicz		
Art Unit	2152 OCT 1 7 2002		
Examiner Name	Not yet assigned		
Attorney Docket Number	4906.P00 Technology Center 210		

		U.S. PAT	ENT DOCUMENTS	
	Cite No. 1 Number - Kind Code 2 (if known	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
"M	US- 5,832,224	11-03-1998	Fehskens, et al.	
U	us. 5,892,912	04-06-1999	Suzuki, et al.	
14	US- 6,035,105	03-07-2000	McCloghrie, et al.	
14	US- 6,061,349	05-09-2000	Coile, et al.	
1	us- 6,145,011	11-07-2000	Furukawa, et al.	
4	US- 6,167,052	12-26-2000	McNeil, et al.	
di	US- 6,289,017 B1	09-11-2001	Shani, et al.	
U	US- 5,262,906	11-16-1993 .	Mazzola	
V _k	US- 5,309,437	05-03-1994	Perlman, et al.	
Ý.	US- 5,550,816	08-27-1996	Hardwick, et al.	
4	US- 5,737,333	04-07-1998	Civanlar, et al.	
W	US- 6,084,892	07-04-2000	Benash, et al.	
y	US- 6,097,719	08-01-2000	Benash, et al.	
$\mathcal{L}_{\mathcal{L}}$	US- 6,172,981 B1	01-09-2001	Cox, et al.	·
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Art Unit	2152		
Examiner Name	Not yet assigned		
Attorney Docket Number	4906.P001D		

		U.S. PATI	ENT DOCUMENTS	
Examiner Initials	Cite No. 1 Number - Kind Code 2 (if known	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
71	US- 5659796	08-19-1997	Thorson et al.	
/ i	US- 5604680	02-18-1997	Bamji et al.	
,	US- 5684974	11-04-1997	Onodera	
7,	US- 5692193	11-25-1997	Jagannathan et al.	
7,	US- 5761477	06-02-1998	Wahbe et al.	
3/1	US- 5784707	07-21-1998	Khalidi et al.	
7	US- 6105027	08-15-2000	Schneider et al.	
1	US- 6128665	10-03-2000	Iturralde	
4	US- 6219699 - B1	04-17-2001	McCloghrie et al.	
74	US- 6223218 - B1	04-24-2001	Iijima et al.	
à	US- 6226751	05-01-2001	Arrow et al.	
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	FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No. ¹	Foreign-Patent-Document Country Code 3 - Number 4 - Kind Code 5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т6	

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Complete if Known Substitute for form 1449B/PTO 10/020,388 Application Number INFORMATION DISCLOSURE December 14, 2001 Filing Date **First Named Inventor** William Salkewicz STATEMENT BY APPLICANT 2152 **Group Art Unit** Not yet assigned **Examiner Name** (use as many sheets as necessary) 4906.P001D **Attorney Docket Number** Sheet of

0		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	_
xaminer hitials	Cite No.1	include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	
1		Adve, V., et al., "Performance Analysis of Mesh Interconnection Networks with Deterministic Routing," IEEE Transactions on Parallel and Distributed Systems, Vol. 5, No. 3, pp. 225-246, March 1994.	
4		Almquist, P., "Towards Requirements for IP Routers," Network Working Group, RFC 1716, November 1994.	
4		Austin, T., et al., "Efficient Detection of All Pointer and Array Access Errors," Proceedings of the ACM Conference on Programming Language Design and Implementation, pp. 290-301, June 1994.	
74		Bolla, R., et al., "A neutral Strategy for Optimal Multiplexing of Circuit-and-Packet-Switched Traffic," GLOBECOM '92 IEEE Communication Society, pp. 1324-1330, December 1992.	
4		Brooks, R., et al., "An Optimizing Compiler for Lexically Scoped LISP, " ACM Symposium on LISP and Functional Programming, pp.261-275, August 1982.	
74		Buzen, J.P., et al., "The Evolution of Virtual Machine Architecture, " AFIPS National Computer Conference, pp. 291-299, June 1973.	
N	-	Comer, D., "Computer Networks and Internets," Prentiss Hall, 1997.	
4		Cmelik, B., et al., "Shade: A Fast Instruction - Set Simulator for Execution Profiling, " ACM SIGMETRICS Conference on Measurement and Mpdeling of Computer Systems, pp. 128-137, May 1994.	
U		Dally, W.J., et al., "Deadlock-Free Message Routing in Multiprocessor Interconnection Networks," IEEE Transactions on Computers, Vol. C-36, No. 5, pp. 547-553, May 1987.	
U _L		Dally, W.J., "Virtual-Channel Flow Control," Proc. 17th International Symposium on Computer Architecture, pp. 60-68, May 1990.	
U		Dally, W.J., "Performance Analysis of k-ary n-cube Interconnection Networks, "IEEE Transactions on Computers, Vol. 39, No. 6, pp. 775-785, June 1990.	

Examiner	Vum	Date 9/01/r4
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Group Art Unit	2152		
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8		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	<u>_</u>
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U		Dally, W.J., et al., "Deadlock-Free Adaptive Routing in Multicomputer Networks Using Virtual Channels," IEEE Transactions on Parallel and Distributed Systems, Vol. 4, No. 4, pp. 466-475, April 1993.	
14		Davidson, J., et al., "Cint: A RISC Interpreter for the C Programming Language," Proceedings of the SIGPLAN '87 Symposium on Interpreters and Interpretive Techniques, pp. 189-197, June 1987.	
7	·	Deutsch, L.P., et al., "Efficient Implementation of the Smalltalk-80 System," Proceedings of the 11th Annual ACM Symposium on Principles of Programming Languages, pp. 297-302, January 1984.	
M		Duato, J., "Anew Theory of Deadlock-Free Adaptive Routing in Wormhole Networks," IEEE Transactions on Parallel and Distributed Systems, Vol. 4, No. 12, pp. 1320-1331, December 1993.	
- Ch		Ellis, J., et al., "Safe, Efficient Garbage Collection for C++," Proceedings of the 1994 USENIX C++ Conference, pp. 142-177, April 1994.	
U		Fischer, C., et al., "The Implementation of Run-Time Diagnostics in Pascal," IEEE Transactions on Software Engineering, Vol. SE-6, No. 4, pp. 313-319, July 1980.	
U		Gallager, R., "Scale Factors for Distributed Routing Algorithms," NTC '77 Conference Record, December 1977.	
ly		Glass, C.J., "The Turn Model for Adaptive Routing," Proc. 19th International Symposium on Computer Architecture, PP. 278-287, May 1992.	
Th		Goldberg, R., "Survey of Virtual Machine Research," Honeywell Information Systems and Harvard University, pp. 34-45, June 1974.	
U		Jesshope, C.R., et al., "High Performance Communications in Processor Networks," Proc. 16th International Symposium on Computer Architecture, pp. 150-157, May 1989.	
We		Kirkpatrick, S., et al., "Optimization by Simulated Annealing," Science, Vol. 220, No. 4598, pp. 671-680, May 1983.	
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Examiner Signature	Mon	Date Considered	9/	01/04	ų.

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue	T ²		
de		Leinwand, A., et al., Cisco Router Configuration, MacMillan Technical Publishing, Indianapolis, IN, 1998.			
4		Li, K., et al., "Memory Coherence in Shared Virtual Memory Systems," ACM Transactions on Computer Systems, Vol. 7, No. 4, pp. 321-359, November 1989.			
U		Linder, D.H., et al., "An Adaptive and Fault Tolerant Wormhole Routing Strategy for k-ary n-cubes," IEEE Transactions on Computers, Vol. 40, No.1, pp. 2-12, January 1991.			
4		Luckham, D., et al., "Verification of Array, Record, and Pointer Operations in Pascal," ACM Transactions on Programming Languages and Systems, Vol. 2, No. 2, pp. 226-244, October 1979.			
Y		May, C., MIMIC: A Fast System/370 Simulator," Proceedings of the SIGPLAN '87 Symposium in Interpreters and Interpretive Techniques, pp. 1-13, June 1987.			
4		Sites, R., et al., "Binary Translation," Communications of the ACM, Vol. 36, No. 2, pp69-81, February 1993.			
u		Stallings, W., High Speed Networks: TCP/IP and ATM Design Principles, Prentice Hall, 1998.			
U		Talia, D., "Message-Routing Systems for Transputer-Based Multicomputers," IEEE Micro, No. 3, pp. 62-72, June 1993.			
4		Wahbe, R., et al., "Efficient Software-Based Fault Isolation," Proceedings of the Symposium 14th ACM on Operating System Principles, pp. 203-216, December 1993.			
~		Yang, C.S., et al., "Performance Evaluation pf Multicast Wormhole Routing in 2D-Torus Multicomputers," ICCI '92 IEEE Computer Society, pp. 173-178, May 1992.			
M		Yantchev, J., "Adaptive, Low Latency, Deadlock-Free Packet Routing for Networks of Processors," IEEE Proceedings, Vol. 136, Pt. E, No. 3, pp. 178-186, May 1989.			

Examiner	1/1000	Date 9/0	1/64
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